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# STRATEGIC WRITING

A Briefing to USDA-ERS Line Staff

William J. Hudson June 21, 1989

USDA-ERS Contract 53-3AEJ-9-30046, May 4, 1989 ©William J. Hudson, 7313 Marchester, Maumee, OH 43537

#### THE NEED FOR STRATEGIC WRITING

Strategic writing is an approach which enables authors to compete more successfully for readers in an age of overinformation, specialization, and computerization. The approach clarifies the author's argument by means of sequential thematic units, plain language, and visual diagrams.

We are often told that we live in the Age of Information. Or just as accurately, that we live in the Age of Overinformation. The truth of this can be seen in the quantities of information published. For instance, in the case of full-length books, some 50,000 titles are published every year. Half of these are nonfiction. If these 25,000 books are spread evenly over the work-year, this is 200 new books per day. To examine this six-foot high stack, let's say at the rate of one second per page, would take a full eight hours.

So the sheer volume of information today makes it clear that we must each have a selection strategy and employ it vigorously — almost in self-defense.

An active reader might be one who reads one book per week. This is 0.2% of what is newly available each week. Most of us are less active — that is, we are far more selective.

The figures given for books can be multiplied several times if we consider newspapers, magazines, journals, reports, memos, and other forms of print. Then this total can be multiplied again by each of the other media such as radio, TV, and film.

The selection problem is compounded by specialization. The hundreds of thousands of books, articles, and reports each year are written in literally thousands of different, specialized languages.

Computerization, thus far, has also compounded the problem. Computerized analysis has increased the volume of reports, and computerized typesetting has led to a further multiplicity of styles and formats, most of which obscure the arguments of the reports.

The need is thus strong for an approach to writing which enables authors to compete more successfully for readers in today's world. The approach described here is called Strategic Writing. It has four main elements, as shown in the table. The key to the approach is clarification of a report's argument by means of sequential thematic units, with extra reliance on plain language and visual diagrams.

#### **ELEMENTS OF STRATEGIC WRITING**

- Accepting today's fractionated audience and the power of plain language
- Competing at each step of the modern "reading" process
- Adopting sequential thematic organization and adding further to the primacy of the argument
- Giving extra attention to (transparent) packaging

# ACCEPTING TODAY'S FRACTIONATED AUDIENCE AND THE POWER OF PLAIN LANGUAGE

As many audiences can be targeted as there are individual people. The alternative to targeting a narrow audience is to speak in plain language, which is a context shared by all specialists.

Several decades ago, it was possible to enumerate the principal disciplines which contribute to human knowledge. The list—mathematics, history, engineering, biology, law, etc.—may have had a few dozen entries.

Today, in a world of knowledge ever more diversified, complete enumeration of specialties is not possible. There are hundreds, if not thousands, or tens of thousands. An engineer, for instance, must not only be a chemical engineer, but a piezoelectric crystal engineer with experience in lead zirconate titanate, and so on and so forth — to have a chance of contributing new knowledge to his field.

Likewise, a politician — long thought of as a typical layman — must have very specialized knowledge of his region, of the rules of his legislative body, of countless programmatic initiatives, and of the motives of his colleagues and constituents.

Writers have long been urged to target their audience. The belief has been that this could be done with precision. Consumer goods companies spend hundreds of millions of dollars to target advertisements to segments of the broad public audience. This expenditure has met with questionable success, because in today's world it is only a small exaggeration to say that as many audiences can be targeted as there are individual people. Each of us is a specialist in something. Furthermore, a single specialist author, for instance an agricultural economist, does not have the financial resources for targeting which may be available to Procter and Gamble.

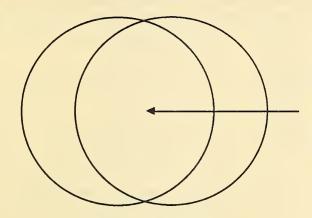
As shown in the opposite figure, when two or more specialists approach some other person (who will also turn out to be a specialist in some other subject), the common context between them is plain language. Ordinary speech remains the most powerful common denominator available to any and all writers. Plain language can be understood by all specialists. The reverse approach, which insists that other people must learn the special language of a writer's particular discipline fails — because of audience fractionation and information overload.

Strategic writing thus offers an alternative to narrow targeting of audiences. Strategic writing focuses on the translation of specialized, technical arguments into plain language, which can more successfully compete for a broader range of important readers than any other approach.

Additional Benefits. An author who discovers how to say his argument plainly may understand it better. An author who cannot say his argument plainly may not really understand it. The elements of strategic writing will all be found to feed benefits backward into the actual process of research within a specialty.

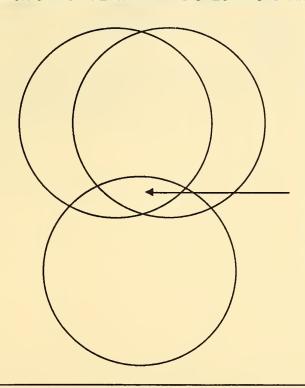
#### **COMMUNICATION WORKS VIA SHARED CONTEXT**

• COMMUNICATION BETWEEN TWO SPECIALISTS (IN ONE DISCIPLINE)



Large amount of shared context in the discipline eases communication. Raw data and evidence can be transferred directly, without full elaboration of arguments and conclusions.

COMMUNICATION BETWEEN TWO SPECIALISTS AND A NON-SPECIALIST



The entire shared context of the two specialists cannot be shared with other persons -- unless they too were to become similar specialists. The transfer of information to a non-specialist must be done with complete arguments and conclusions, instead of raw data.

The shared context for communicating arguments is powerful but underrated: It is known as "ordinary speech," or "plain language." We all have it in common, regardless of our specialty.

## COMPETING AT EACH STEP OF THE MODERN "READING" PROCESS

Because of information overload, modern readers scan and select before actually reading. A successful report must compete for the reader at each step in this process.

Modern readers do not begin reading by reading, but by scanning to select what they will eventually read in full. The opposite table shows the reader's sequence, his motives, the role of prose, visuals, and structural markers, along with the reader's increasing grasp of the argument as he moves further in the sequence.

Strategic writing competes for full readership by competing also for each successive step of partial readership. At each step the key to successful competition is providing clues to the argument's structure — and finally a full and convincing disclosure.

Each structural and semantic aspect of a report has multiple functions. For instance, a good visual is one which is both interesting as preview and then later is effective as illustration and proof.

An important point must be made about the role of prose, as opposed to headings, visuals, and other features of a report. The quality of the written prose cannot really be visually hidden. In other words, bad prose cannot be disguised by clever format. Good prose, in and of itself, provides visual clues and inducements without help from the format editor... but the editor can amplify these good signals. Well-organized thought (i.e., "good prose") gives off spontaneous signals to the eye, and is the most important single indicator of value to the reader as scanner.

#### THE MODERN PROCESS OF "READING"

-		55185518	DOL 5	DOL 5	DOLE	55.555.5
	READER'S	READER'S	ROLE OF THE	ROLE OF THE	ROLE OF THE	READER'S GRASP OF
	SEQUENCE	MOTIVES	PROSE	VISUALS	WINDOWS*	ARGUMENT
-			THOOL	VIOUALO	WINDOWO	
	Scans (examines)     whole document	"Is there something here that's really interesting? If not, can I eliminate this from my overload?"	A visual fabric; a background with buried and partly visible clues	A set of interesting previews of the argument	An expected set of visible claims and unburied clues to the argument	10%
	2. Decides to examine with more care	"No, I can't eliminate. But can I find the argument without reading?" (If can't find argument, tosses document.)	to the argument			20%
:	3. Decides to read	"Yes, I see the argument. It's interesting and import- ant to me, and appears to be well-defended."				40%
	4. Reads the prose from beginning	"I'll add this to my (short) list of things I've actually read carefully."	Text (logical, reasoned argument)	Illustration and proof	Map of the argument's Structure	90%

<sup>\*</sup>The entire family of standard markers, such as title, subtitle, subhead, author's name, author's position, figure title, figure labels, figure caption, afternote, et al.

## ADOPTING SEQUENTIAL THEMATIC ORGANIZATION AND ADDING FURTHER TO THE PRIMACY OF THE ARGUMENT

Written prose is inherently discontinuous, breaking into natural thematic units of about 500 words in length. Using format to highlight the sequence of separate topics helps the reader grasp the argument more quickly and thoroughly.

Most people speak of writing, especially a long passage of prose, as though it were continuous. This is a mistake. Written discourse is inherently discontinuous, no matter how it is typeset. Prose is made up of naturally occurring thematic units, which modern theorists call "topics."

A topic in the English language averages about 500 words in length. It may be shorter or it may be longer, but a 100-word passage, for instance, will tend to be a very weak and incomplete statement of a theme (a single argument), whereas a 1000-word passage will tend to break apart into two or more separate topics.

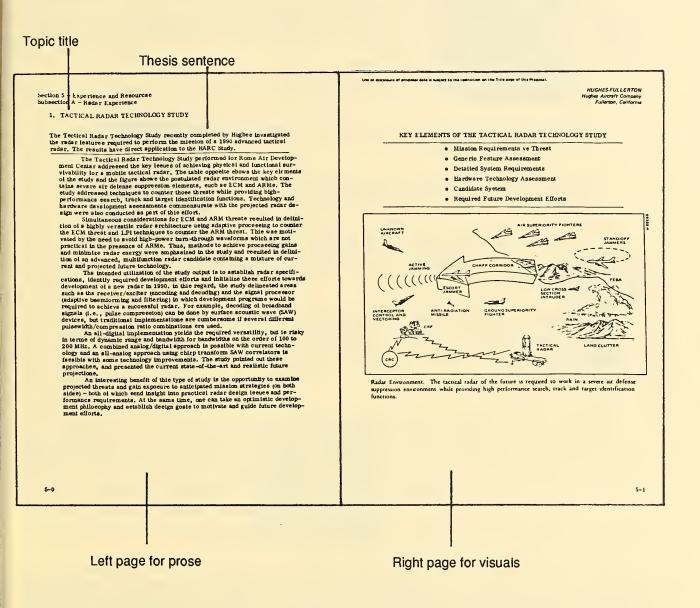
In this connection, it is well to remember our experience in high school with the "500-word theme," a unit which occurs spontaneously in schools nationwide, without legislation or educational edict.

The use of sequential thematic organization, built around 500-word units, began in the early 1960s in the aerospace industry of southern California. As shown in the opposite figure, the unit consists of two 8 1/2 x 11 pages, the left page for text and the right page for visuals. This arrangement occurred first as a printing convenience to aid in the assembly of large technical proposals authored by multiple authors and assembled under the pressure of a deadline. It was then found that the technique had great appeal to proposal <u>readers</u>, because they could better find and follow the argument (the claims and proofs of the proposal).

The two-page units were given "topic titles" and "thesis sentences." The topic title is an active noun phrase (or sometimes a verb phrase) which gives the reader a broad clue to the argument contained on the two-page spread. The thesis sentence states both the claim and the proof as succinctly as possible. Many refinements have been made to the Sequential Thematic approach, and most major defense contractors use the method almost exclusively on proposals and important reports.

If a technical argument is weak, the topicized approach further reveals the problem. Arguments cannot stay hazy and hidden when the format of two-page, sequential thematic units is used.

#### ORIGIN OF SEQUENTIAL THEMATIC ORGANIZATION



Sample page from Hughes Aircraft Corporation Proposal (by permission). Mr. James R. Tracey, Technical Writing Manager for Hughes-Fullerton, originated the concept and main principles of STOP (Sequential Thematic Organization of Proposals) in the mid-1960's. Many other aerospace companies have adopted the method and refined it.

#### GIVING EXTRA ATTENTION TO (TRANSPARENT) PACKAGING

The most crucial and interesting part of a report is its argument, not its packaging; the role of the package is to be a transparent window to the argument. For this to happen, the author must become a facilitator to the packaging process.

The history of both literary criticism and philosophy is filled with debate over the role of form vs. content, style vs. substance, or (as we will characterize the distinction here) packaging vs. argument. It is not possible to resolve the debate but rather to take a set of positions on it which will enhance the potential of Strategic Writing.

Theorem 1. The way information is packaged is as important as the content.

Corollary A. It is as much work to package information properly as to develop the information in the first place.

Corollary B. Not packaging information properly means that its value is diminished by some factor between 0 and 50%, if not more.

Corollary C. Proper packaging of information cannot be separated from the process of developing the information in the first place, i.e., the packaging process originates in the research itself.

Theorem 2. The key to effective packaging is clarifying the argument. The interesting thing about a report is the argument, not the layout. The function of the layout is to make the argument visible, faster and more effectively than competitor publications.

Question. Who does the packaging?

Answer. The author originates the argument, and to clarify the argument requires knowing it intimately; therefore, the author is key to packaging the argument. This is not to say that there can be no division of labor between author and editor, or that the author must become a self-sufficient packaging expert. However, the author must indeed become a packaging facilitator. Besides making the report better for readers, the change of author to packaging facilitator improves the actual process of research, especially the early delineation of the argument and its value. This process in the aerospace industry is called "storyboarding."

The kind of packaging of which we are speaking here is the opposite of that shown in the example at right. We are talking <u>not</u> of making things "pretty" or "artful," but of making the layout a transparent (and thus powerful) window to the argument. The key to transparency is sequential thematic organization, clear visuals, and plain language.

#### EXTREME WORST CASE OF PACKAGING ERROR

INCLUDED WITH ISSUE 2.2 in our nailing to subscribers was our Inial Caps poster. (see this issue, page 4). Some of the manipulations we sed to produce the caps were

nore involved little more

han others, so ve've decided explain in letail how they

vere created.

and for good measure we've brown in a few more effects.

The Gregorian T opposite was reated by stroking, filling and offetting multiples of the Fluent La-Fonts letterform within Adobe lustrator 88, which was used to reate most of the effects in this pread. The type was then placed ntop of a digitized floral pattern.

Likewise, the A below and to the left is an example of Judith Sutcliffe's Flourish font that was also stroked, and filled, and then placed on top of a scanned textured of

marbleized paper.

The marble T and the chrome A were formed in basically the same way using the outline serif font from Adobe Illustra-

tor's Collector's Edition. Three copies of the cap were combined and altered to form the chiseled appearance (1 and 2).

For the A, three versions of light,

medium and dark graduated fills were created with Illustrator's blending tool (3). The completed ramps were then placed on top of the outline of the letterform. This

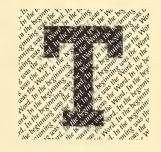
outline was designated as a mask, which would then act as a "cookie cutter" to punch out the overlying image (4). For the T, the marble image was scanned and then manipulated in brightness and contrast with Letraset's ImageStudio, and then saved as three slightly different files in EPS, so that the versions of light, medium and dark could be brought into Illustrator with the Place command (5). By

> combining and grouping several masked images, you can achieve many effects.

> > The next initial cap

is a Lubalin Graph T with a Palatino Italic texture, both from Adobe Systems, Inc. The pattern of ro-

> tated white text was masked out of the black "T" (yes, you can use any font as a mask in Illustrator — it's just that your on-screen preview of the effect will not show it correctly),



and that grouped combination was then placed over an identical copy of the rotated Palatino copy, though this time the type was filled with black.

Page from Verbum. The emergence of powerful graphics software and font design programs for personal computers has to be time tanger to be the common transparent packaging of the argument. Indeed, the tendency seems to be just the pposite, to embellish the page until it is completely opaque to the argument, and thus uninteresting except as pure artwork.

#### ROLE OF VISUALS

In Strategic Writing, visuals are used as both previews and (later) as proofs of the argument. To do this visuals must have careful callouts and other rubrics to give the reader a self-contained experience.

Visuals have two roles -- preview of the argument to compete for readers while scanning, and illustration of proof of the argument to persuade readers while reading.

Readers want visuals to be self-contained experiences. When examining the visual, they ask, "What is it?" "What is going on in it?" and "What is its significance?" They do not want to be forced to leave the visual to find answers to these questions, and this suggests the use of callouts and other rubrics directly in the visuals -- what we refer to here as "Talking Charts" and "Talking Tables."

A sample of text and associated "talking visual" is given below and at right.

#### SAMPLE TEXT

#### DUBIOUS CLAIMS OF "GREENHOUSE EFFECT"

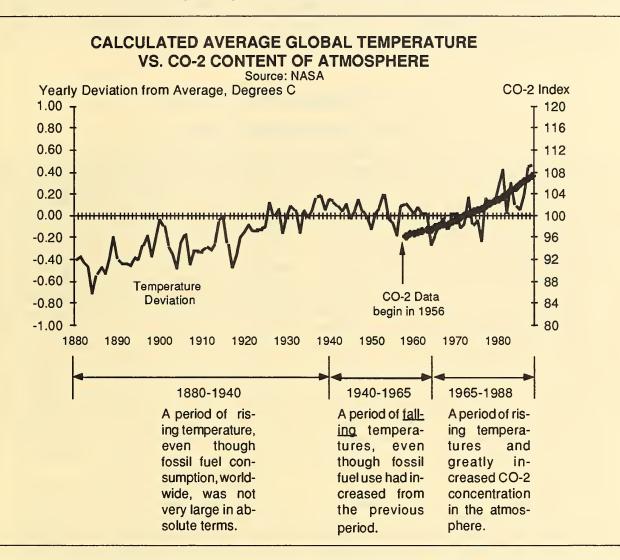
The opposite graph of global temperature rise, cited as evidence of the Greenhouse Effect, is itself the best evidence of the inconclusiveness of the concept. Note that early in the century, temperature rose on its own, before there were significant build-ups of CO-2 from fossil fuel usage. Then, in the middle of the century, the temperature cooled, regardless of what CO-2 may have been doing. These two facts point to natural climatic forces as having the most power.

It should not be doubted, however, that the Greenhouse Effect has been accepted as true by the general population, and thus that the underlying forces of environmentalism have been thereby strengthened. Agricultural supply control groups are using the Greenhouse argument to support their own ideas about reducing U.S. crop output further, in order to "preserve the climate resource." This, together with the pressure for less (or no) chemicals, is a major challenge for U.S. crop production through the 1990's, and one which does not occur in the same degree with most export competitors, especially in the tropical Third World.

#### SAMPLE OF SELF-CONTAINED VISUAL

#### **GLOBAL WARMING:**

- 1. It may not last.
- 2. It may very well <u>not</u> be manmade.



CONFLICTING EVIDENCE. Global temperature goes up in the first period above, 1880-1940, even when the world is not burning much fossil fuel or adding CO-2 to the atmosphere. Then in the period 1940-1965, the temperature actually goes down. The behavior of temperature in these two periods cannot be explained by a steady "Greenhouse Effect", but only by the existence of natural climatic forces, such as changes in the sun, the moon, and volcanic activity. Although there is little doubt of increased levels of CO-2 in the atmosphere in the period 1965-1988, there also would seem little doubt that the natural climatic forces have not vanished. Who really knows whether another period like 1940-1965, that is of cooling, might be underway rather than of warming?

#### VERBAL VISUALS

In the frequent case of an argument's having no convenient way to be illustrated by means of graphs or numerical tables, a "verbal visual" (sometimes called "bullet table") can usually be designed to help the reader find and understand the argument.

An old adage says that a picture is worth a thousand words. Experience with sequential thematic reports shows that the figure is probably closer to 250 words, or about one-half of a thematic unit.

But the occasion frequently arises in technical material when the argument is "dense," but no graph or table of data is appropriate. On these occasions, "verbal visuals," illustrated on these pages, help to compete for readers and to clarify the argument.

#### SAMPLE TEXT

#### GENERAL GOAL OF STAGGERS ACT

The Staggers Act was based on the premise that most transportation within the United States was competitive by 1980. Greater reliance on the marketplace, therefore, was essential for the health of the rail industry. The Staggers Act proposed to free railroads from a variety of common carrier obligations that resulted in unprofitable services or potentially profitable services at unprofitable rates. Railroads were to be allowed much greater freedom to restructure rates and services and to discontinue services by abandoning lines.

The simple principles of the Staggers Act disguised the complex methods by which the act was to be implemented. The Staggers Act amended the 4R Act to state that, except where a railroad had "market dominance," it would be free to set rates where it chose. The ICC had broadly defined "market dominance" after the 1976 Act, so the Staggers Act added the stipulation that a carrier does not have "market dominance" if its rates were below a certain multiple of variable costs. That multiple was set at 1.6 in 1980, and rose to 1.8 in 1984. After 1984, the ratio depends on whether a railroad is earning an adequate return on investment.

The Staggers Act specified major changes in the means of setting rates by allowing for much wider use of contract rates. Confidential contracts between a railroad and a shipper typically specify minimum sizes for single shipments and minimum volumes to be shipped over the length of the contract, and commit the carrier to provide a specified quantity of railcars and commit the shipper to specified loading speeds, all at what may be considerably

below existing tariff rates. Contracts are likely to favor large shippers, because they offer lower rates for high-volume, predictable shipments, altering the longstanding regulatory focus on equalizing rates for all shippers of a commodity and for all ports receiving the commodity. While the Staggers Act offered increased flexibility for railroads to set rates, it also restricted the freedom to cooperate in setting rates by phasing out the right of railroads to coordinate ratesetting through rate bureaus. Only carriers actually participating in joint interline moves of freight can collectively set rates. This right was once specifically protected in the Reed-Bulwinkle Act of 1948.

Elimination of rate bureaus combined with expansion of contract rates to restrict cooperative behavior in ratesetting. Without contract rates, posted tariffs would provide evidence of cheating on collusive agreements, and so serve to enforce such agreements. Railroads would find it more difficult to coordinate pricing, with confidential contracts covering a wide variety of services. Contracts and the ban on rate bureaus combined to foster competition among railroads in place of collusive pricing.

The act also liberalized procedures for abandonment of rail lines. Researchers had argued that restrictions on abandonments had contributed to the poor financial performance of railroads by saddling them with unprofitable services, which also diverted capital spending from more viable routes (34,51). The abandonment provisions of the Staggers Act largely validated steps that the ICC began taking administratively in 1979.

#### SAMPLE "VERBAL VISUAL"

## GOAL OF STAGGERS ACT: Better Performance of U.S. Railroads

- Elimination of rate bureaus.
- Provide more freedom to restructure rates, including wider use of shipment specific contract rates.
- Permit easier abandonment of unprofitable lines.
- Retain rate regulation only where a rail carrier has market dominance.

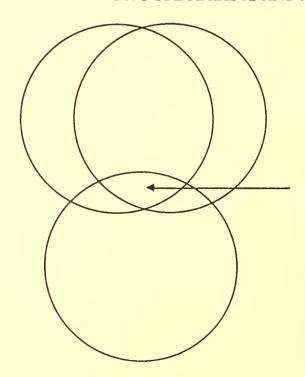
#### CONCEPT EXPANSION

The advice to "boil down" complex, technical material is usually wrong, because it results in algebraic prose which must be carefully studied rather than read. The better approach is "concept expansion," which relies on talking tables and graphs, along with a Socratic method of question and answer to keep the reader involved.

The figure below shows once again the intersection, or common context, between two specialists and a non-specialist. Because this intersection is small, the advice given to reach this mutual territory is often to <u>condense</u> things. "Boil it down!" many people will say about complex economic principles -- which simply won't boil. The principles require illustration and numerical examples before they can be grasped by a non-specialist. But the non-specialist is seen, often rightly, as not having the time, interest or ability to study such examples.

The answer is frequently not concept condensation but <u>concept expansion</u>. In this technique, small and discrete steps are taken to build a larger framework. All special language is converted into its plain language equivalent, and extensive use is made of talking tables and talking visuals. When the so-called "Socratic method" of question and answer is added to the technique, it is often found that the non-specialist takes more interest in the subject than might have been thought -- often spending the time to go through two dozen pages, when he would not have spent one minute on a one-page boiled-down version. The reason for this is that the process of boiling or condensing results is <u>algebraic prose</u> -- unquestionably accurate, but simply undigestible in the present age of overinformation.

#### TWO SPECIALISTS AND A NON-SPECIALIST



The shared context for communicating arguments between specialists and a non-specialist is much smaller than the shared context between the two specialists.

This smailness of the shared context often results in the (bad) advice to condense or "boil down" the argument. The trouble with boiling is that it results in algebraic prose which must be intensively studied rather than read.

# SAMPLE FROM CONCEPT EXPANSION BOOKLET (Basic Mechanisms of U.S. Farm Policy, Part One)

In its simplest form, the Deficiency Payment Rate is calculated as the difference between Target and market price, which means that the answer in this case would be \$1.09 per bushel.

#### CALCULATING DEFICIENCY PAYMENT RATE

Simplest Case

Corn (1987)

Target Price \$3.03

Market Price \$1.94

Deficiency Payment Rate \$1.09

In the Deficiency mechanism, Congress sets a "Target" price, which is its judgment of a desirable return to corn farmers. If the actual market price of corn is below this Target (i.e., deficient), then Congress authorizes USDA to make farmers a payment of the difference, and this payment is called the "Deficiency Payment Rate."

Question: Was there more to the definition of "Deficiency Payment Rate" than just "Target" and "market" price?

# SAMPLE FROM CONCEPT EXPANSION BOOKLET, CONTINUED (Basic Mechanisms of U.S. Farm Policy, Part One)

Yes, the "Loan Rate" has an important role in calculating Deficiency Payment. Let's take another careful look at the definition.

#### **DEFICIENCY PAYMENT**

#### Definition

A government payment made to farmers who participate in feed grain, wheat, rice, or upland cotton programs. The payment rate is per bushel, pound, or hundredweight, based on the difference between a target price and the market price or the loan rate, whichever difference is less. The total payment a farm receives is the payment rate multiplied by the eligible production.

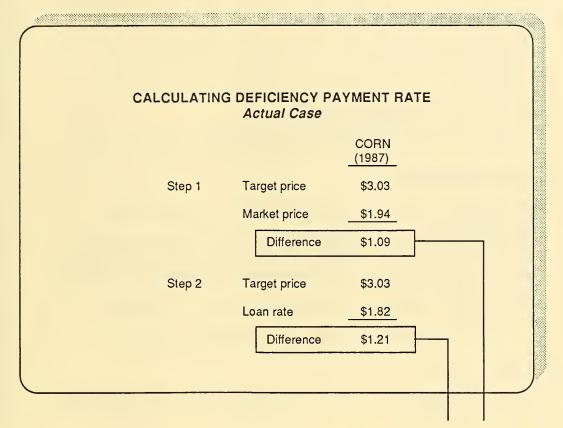
Notice that the calculation of Deficiency Payment Rate requires two steps. First you compare Target with market, and then you compare Target with Loan. Whichever of the two differences is smallest becomes the so-called Deficiency Payment Rate.

Question: Suppose Target is \$3.03, market is \$1.94, and Loan is \$1.82. What is Deficiency?

# SAMPLE FROM CONCEPT EXPANSION BOOKLET, CONCLUDED (Basic Mechanisms of U.S. Farm Policy, Part One)

In this case, the difference between Target and market will be less than the difference between Target and Loan.

To calculate Deficiency requires two steps, as shown below.



In this two-step process, the smallest difference becomes the Deficiency Payment Rate, which in this case is \$1.09.

Question: What is meant by a "Loan Rate," and how does Congress determine at what level to set these figures?

## RESEARCH AND APPLICATION OF STRATEGIC WRITING AT USDA-ERS

#### Sequential Thematic Organization

- Research Reports (Published)
   "Effects of Railroad Deregulation on Grain Transportation
  - "Effects of Railroad Deregulation on Grain Transportation," by James M. MacDonald
- Agricultural Information Bulletins (In progress)
  - "Food Assistance Programs," edited by Enid Hodes
  - "Export Enhancement Programs," by Nichole Ballinger and Vicki Salin (ed.)

#### Concept Expansion Booklets

- "GATT and Agriculture: The Concept of PSE's/CSE's," by Carl Mabbs-Zeno (published)
- "Basic Mechanisms of U.S. Farm Policy, Part One," by Keith Collins (published)
- "Basic Mechanisms of U.S. Farm Policy, Part Two," by Keith Collins (in progress)
- "Basic Concepts of Agricultural Competitiveness," by Kelley White, John Dunmore, et.al. (in progress)
- "Basic Mechanisms of European Community Farm Policy," by Walt Gardener (in progress)
- "Basic Mechanisms of Japanese Farm Policy," by Bill Coyle (in progress)

#### Education and Training

Contract with William J. Hudson for remainder of calendar 1989, coordinated by Jim Sayre, ERS Information



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